



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20431  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10-065,380	10/10/2002	Yuan-Liang Wu	JCLA8066	1017

23900 7590 04/03/2003

J C PATENTS, INC.  
4 VENTURE, SUITE 250  
IRVINE, CA 92618

EXAMINER
----------

TRAN, LONG K

ART UNIT	PAPER NUMBER
----------	--------------

2818

DATE MAILED: 04/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/065,380

Applicant(s)

WU ET AL.

Examiner

Long K. Tran

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8 and 16-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of claims **1 – 6, 8, 16** in Paper No. **3** is acknowledged.
2. Claims **7, 9 – 15** have been cancelled in Paper No. **3**
3. Claims **17** and **18** have been added in Paper No. **3**
4. Claims **1 – 6, 8** and **16 – 18** are presented for examination.

### *Priority*

5. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Taiwan on November 01, 2001. It is noted, however, that applicant has not filed a certified copy of the application no. **90127127** as required by 35 U.S.C. 119(b).

### *Specification*

6. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
7. The disclosure is objected to because of the following informalities: Paragraph 0034, line 2, change "144" to -- 114 --.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claim **18** is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims languages "having a first area defined by the contour of the first capacitor electrode" and "having a second area defined by the contour of the second capacitor electrode" are not in the specification and not in drawings.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claim **8** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "if" is an uncertain term in a device claim language.

### ***Claim Rejections - 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims **1 – 6, 8** and **17** are rejected under 35 U.S.C. 102(e) as being anticipated by Kawahata (US Patent No. 6,356,318).

Regarding claim **1**, Kawahata discloses an unit cell in a liquid crystal display device, the unit cell comprising: a first capacitor electrode 7' (figs. 5 and 6) on a substrate 1 (figs. 5 and 6); a capacitor dielectric layer 10 (figs. 5 and 6) on the first capacitor electrode; a second capacitor electrode 15 (figs. 5 and 6) on the capacitor dielectric layer, wherein the second capacitor electrode has a surface area smaller than the first capacitor electrode, to prevent overlapping with edges of the first capacitor electrode; a passivation layer 16 (figs. 5 and 6) on the second capacitor electrode, wherein the passivation layer has an opening 17 and 18 (figs. 5 and 6) that exposes a portion of the second capacitor electrode; and a pixel electrode layer 19 (figs. 5 and 6) on the passivation layer such that the pixel electrode layer and the second capacitor electrode are electrically connected through the opening in the passivation layer (cols. 3 – 7 and claim 6).

Regarding claim **2**, Kawahata discloses an overlapping region between the first capacitor electrode and the second capacitor electrode is substantially equal to the surface area of the second capacitor electrode (figs. 5 and 6).

Regarding claims **3 – 5**, Kawahata discloses the pixel electrode is connected to a switching element; the pixel electrode is connected to a thin film transistor; and the pixel electrode is connected to a common voltage (figs. 1 – 8; col. 1, lines 37+; col. 2 lines 1 – 48).

Regarding claim **6**, Kawahata discloses a storage capacitor structure in a unit cell of a liquid crystal display device, the storage capacitor structure comprising: a first

capacitor electrode 7' (figs. 5 and 6) on a substrate 1 (figs. 5 and 6); a capacitor dielectric layer on the substrate 10 (figs. 5 and 6); and a second capacitor electrode 15 (figs. 5 and 6) on the capacitor dielectric layer, wherein the edges of the second capacitor electrode are bounded within the edges of the first capacitor electrode (figs. 2, 4 and 6).

Regarding claims 8 and 17, Kawahata discloses storage capacitor for holding a voltage provided from a signal line of a liquid crystal device within a predetermined interval, the storage capacitor comprising: a first capacitor electrode 7' (figs. 5 and 6) disposed on a substrate 1 (figs. 5 and 6) of the liquid crystal device; a second capacitor electrode 15 (figs. 5 and 6) disposed substantially over the first capacitor electrode electrically connected to a pixel electrode 19 (figs. 5 and 6); and dielectric means 10 (figs. 5 and 6) laminated between the first capacitor electrode and the second capacitor electrode; wherein an area of the second capacitor electrode normally projected on the plane of the first capacitor electrode is substantially bounded within an area of the first capacitor electrode. However, Kawahata does not explicitly disclose a functional claim language "to prevent electrical short between the second capacitor electrode and the signal line". Kawahata capacitor structure's is identical as claims 1 – 6, 8 and 17. Therefore, it is inherent that Kawahata device also greatly reduces the electrical short between the second capacitor electrode and the signal line.

### ***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim **16** is rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant Admitted Prior Art (AAPA) in view of Kawahata (US Patent No. 6,356,318).

Regarding claim **16**, the AAPA discloses a liquid crystal display device, comprising: a plurality of scan lines; a plurality of signal lines; and a plurality of pixels each including a liquid crystal cell having a pixel electrode connected to a storage capacitor and a switching element connected between the liquid crystal cell and one of the signal lines, a gate of the switching element being connected to one of the scan lines; wherein a first capacitor electrode, a capacitor dielectric layer and a second capacitor electrode together form the storage capacitor,

Kawahata discloses an overlapping region between the second capacitor electrode and the first capacitor electrode has an area substantially equal to the area of the second capacitor electrode (figs. 5 and 6; col.3, lines 12 - 20).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the AAPA device with an overlapping region between the second capacitor electrode and the first capacitor electrode has an area substantially equal to the area of the second capacitor electrode as taught by Kawahata in order to increase capacitance per unit area of the storage capacitors.

### ***Conclusion***

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lim et al. (US Patent Application Publication No. US 2002/0093016) disclose a thin film array substrate for liquid crystal display similar to that of Kawahata (US Patent No. 6,356,318).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Long K. Tran whose telephone number is 703-305-5482. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 703-308-4910. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7466 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-3329.

Long Tran 

March 26, 2003

  
HOAI HO  
PRIMARY EXAMINER